


**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**INTERDEPARTMENT CORRESPONDENCE**

**FILE** P. I. No. 0003168, 0004086, Gwinnett County **OFFICE** Preconstruction  
MSL-0003-00(168) & MSL-0004-00(086)  
SR 316 from I-85 to SR 20 for HOV Lanes **DATE** March 11, 2008

**FROM**  Genetha Rice-Singleton, Assistant Director of Preconstruction

**TO**  SEE DISTRIBUTION

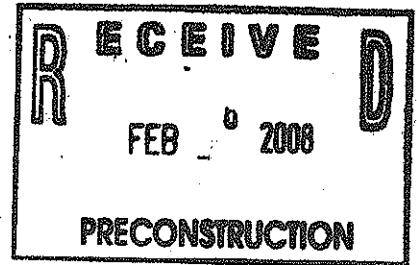
**SUBJECT** APPROVED REVISED PROJECT CONCEPT REPORT

Attached for your files is the approval for subject project.

Attachment

**DISTRIBUTION:**

Brian Summers  
Glenn Bowman  
Ken Thompson  
Michael Henry  
Keith Golden  
Angela Alexander  
Paul Liles  
Russell McMurry  
Robert Mahoney  
Ben Buchan  
BOARD MEMBER



DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE MSL-0003-00(168), MSL-0004-00(86) Gwinnett County OFFICE Urban Design  
SR 316 from I-85 to SR 20 for HOV Lanes DATE January 4, 2008  
P.I. No. 0003168, P.I. No. 0004086  
FROM *James B. Buchan*  
James B. Buchan, P.E., State Urban Design Engineer  
TO Genetha Rice-Singleton, Assistant Director of Pre-Construction  
SUBJECT Revised Project Concept Report

Attached is the original copy of the revised Concept Report for your further handling for approval in accordance with the Plan Development Process (PDP).

This revised concept addresses changes in alignment, expansion of the proposed Right of Way limits and access control to SR 316. Alignments to the SR 316 loop ramps at Collins Hill Road and business access road between Collins Hill Road and SR 20 have been revised. The Right of Way limits in the original Concept Report will be expanded on the north and south side for frontage roads that will be added between SR 20 and Hi-Hope/Hurricane Shoals Road. Access to SR 316 as contained in the approved Concept Report is revised in regards to Arrington-Blount Ford dealership, Gwinnett County Sheriffs Department and Hosea Road.

The revised concept as presented herein and submitted for approval is consistent with that which is included in the Regional Transportation Program (RTP) and/or the State Transportation Improvement Program (STIP).

DATE 2-5-08

*Angela T. Alexander*  
State Transportation Planning Administrator

JBB:NO

*Distribution:*

Brian Summers, P.E., Project Review Engineer  
Glenn S. Bowman, P.E., State Environmental/Location Engineer  
Keith Golden, P.E., Traffic Safety and Design Administrator  
Angela T. Alexander, State Transportation Planning Administrator  
Jamie Simpson, Financial Management Administrator  
Russell McMurry, District 1 Engineer  
Paul Liles, P.E., State Bridge Design Engineer

Attachments (1): Revised Concept Report

**REVISED PROJECT CONCEPT REPORT**  
**MSL-0003-00(168), MSL-0004-00(86), Gwinnett County**  
**SR 316 from I-85 to SR 20 for HOV Lanes**  
**P.I. No. 0003168, P.I. No. 0004086**

**Need & Purpose (as stated in the original approved concept report)**

**Background**

The growth in traffic congestion in the Metro Atlanta area over the years has been well documented. Efforts to accommodate this growing congestion have included many major additions and improvements to the area's arterials streets, freeways and transit rail lines.

During 1973, the Atlanta Regional Commission (ARC), in cooperation with the affected local governments, the Metropolitan Atlanta Rapid Transit Authority (MARTA), and the Georgia Department of Transportation (GDOT), began a comprehensive planning process designed to develop a long-range guide for regional growth and development. In 1975, the Commission adopted a guide for growth, known as the Regional Development Plan (RDP). Extensive detailed analysis and evaluation of the transportation element of the RDP resulted in the preparation of the Regional Transportation Plan (RTP), which indicated that a system of good arterial and collector roads would be needed to complement the major transit facilities of the Atlanta region.

Today, this program of major facility construction is reaching the point where additional such projects carry increasing economic, social and environmental costs. This situation has been addressed in two major Legislative acts ~ the Clean Air Act Amendment of 1990, and the Intermodal Surface Transportation and Efficiency Act of 1991. These legislative acts encourage and prescribe more efficient use of the existing transportation system in order to both improve the air quality and to provide an effective transportation system. One of the major strategies promoted by these acts is to increase the vehicle occupancy rate. The creation of high occupancy vehicle (HOV) lanes in major commuter corridors is an effective means to promote and encourage higher occupancy rates in the metro area's vehicles.

Express or HOV lanes are intended to provide choice, mobility and relief from congestion for HOV users, particularly during the peak hours. During this time period, auto occupancy rates tend to be higher overall, and the origins and destinations of work trips are more concentrated, lending themselves to ride sharing and transit usage. There are other objectives of HOV lanes, including reduced energy consumption, improved air quality, reduced total person travel time and improved efficiency of public transit operations and reliability of transit service in order to induce mode shifts.

**Deficiencies**

There currently is no HOV service within the SR 316 corridor. However, traffic studies estimate that 19 percent of the 2029 projected Daily Traffic Volumes and Peak Hour Traffic Volumes will be High Occupancy Vehicles. For SR 316, the 2029 AADT forecasts show 24,400 vehicles in the proposed HOV facility and 135,400 in general lanes. Therefore effective opportunities exist to accommodate the current volumes and encourage greater volumes of HOV traffic along SR 316. Along with proposed changes to the interchanges, the proposed project could maintain a 2029 Level of Service (LOS) C in HOV lanes under these conditions. Currently, LOS F exists during peak hours and would continue to operate at LOS F in 2029 without HOV and interchange improvements.

### Accident Data and Trends

Below is the accident summary for SR 316 within the limits of this project. The table presents the available data from the most recent three years, and a comparison of the rates to the statewide averages from all Georgia Urban Principal Arterial NHS Freeways.

For SR 316, the accident data rates are slightly higher than the statewide average. Improvements to the SR 316 corridor such as addition of interchanges at existing at-grade intersections and barrier separation of HOV vehicles from the general purpose lanes should have a positive impact to the safety and accident rates shown below.

### **Accident Summary for SR 316 (Milepost 0.4 - 8.56)**

Length: 8.16 Mi., Principal Arterial, Freeway, NHS, Urban

Average Daily Traffic: 69,000

\* Rates in Accidents per 100 million vehicle miles

	2000	YEAR 2001	2002	Average	Average Statewide 2000-2002
<b><u>Crashes</u></b>					
Number	264	347	506	372.3	
Rate*	128.5	168.8	246.2	181.2	171
Annual Change		31.4%	45.8%		
<b><u>Injuries</u></b>					
Number	81	127	167	125.0	
Rate*	39.4	61.8	81.3	60.8	40
Annual Change		56.8%	31.5%		
<b><u>Fatalities</u></b>					
Number	2	2	0	1.3	0.52
Rate*	0.97	0.97	0.00	0.6	

Existing traffic north of SR 316 on SR 20 is approximately 49,000 AADT and the 2029 projected AADT is 100,500. The existing traffic on SR 316 approaching SR 20 from the west is 69,000 and the 2030 projected AADT is 135,400.

The first two existing signalized intersections traveling eastbound on SR 316 are Collins Hill Road and SR 20. While the existing Collins Hill Road intersection has significant volumes that continue to increase, the real delay on SR 316 is from the signalized intersection at SR 20 and SR 316. The existing traffic demand at the intersection of SR 316 and SR 20 presents significant delay and congestion to the traveling public along the SR 316 corridor and nearby cross streets. Because of the high volumes of traffic entering at all legs of this intersection, the existing signal cannot be timed in such a way to give enough green time to accommodate the demands placed on this intersection. This intersection therefore operates at a Level of Service F. Delay at this intersection causes the failure of the adjacent at-grade intersections at Collins Hill Road, Hi-Hope Road, Progress Center Avenue, and Cedars Road.

### **Logical Termini**

Proposed project MSL-0003-00(168) has logical termini as its western terminus would connect with proposed project HPP-IM-85-2(146), P.I. Number 110530, which will reconstruct the I-85/SR 316 interchange including HOV lanes. This connection will occur approximately 2,200 feet west of Breckinridge Boulevard.

The eastern terminus is logical as it ends at the proposed HOV interchange at Hi-Hope Road and continues east through the Progress Center Drive intersection. Addition of the HOV lanes between Interstate 85 and Hi-Hope Road will represent significant time savings for HOV users over those traveling in the SOV lanes. These time savings are represented below:

<b>SR 316 HOV Time Savings (I-85 to Hi-Hope Road HOV Interchange)</b>			
<b>Facility</b>	<b>Direction</b>	<b>Time of Day</b>	<b>Time Savings</b>
SR 316	Eastbound	PM	23.5 minutes
SR 316	Westbound	AM	8 minutes
SR 316	Westbound	PM	12+ minutes

### **Consistency with Other Plans**

In September 2001, the Georgia Department of Transportation (GDOT) initiated a contract to develop a High-Occupancy Vehicle (HOV) Strategic Implementation Plan for the Atlanta Region. This implementation plan builds on the early planning efforts of the Atlanta Regional Commission's (ARC) 2025 Regional Transportation Plan (RTP). The purpose of this plan was to provide GDOT and its regional partners with a strategy for building HOV lanes now and in the future. The study was completed in October of 2003. This study clearly designated the need for HOV on SR 316 from Interstate 85 to Drowning Creek Road in eastern Gwinnett County, and eventually to US 78 in Barrow County.

The HOV ingress and egress ramps will be located based on the recommendations of the October 2003 HOV Implementation Plan, which were validated through traffic studies forecasting proposed HOV demand.

Several other projects in the area that will be coordinated in project development (if necessary) include:

1. HPP-IM-85-2(146), Gwinnett County, P.I. No. 110530, *I-85 at SR 316 Interchange and HOV Lanes*
2. CSNHS-M002-00(825), Gwinnett County, P.I. No. M002825, *SR 316 from SR 120 to SR 8/US 29 Concrete Rehab*
3. PE(CS)STP-0007-00(016), Gwinnett County, P.I. No. 0007016, *SR 316 at CR 183/Progress Center Avenue Operational Improvement*
4. RWNHS-0006-00(306), Gwinnett County, P.I. No. 0006306, *SR 316 from SR 20 East to Barrow County Line -Advance R/W Acquisition Only*

### **Need & Purpose**

The purpose of the proposed project is to provide managed lanes that create realistic travel time savings that will lead to the traveling public taking advantage of the alternative modes of transportation that will be made available.

The proposed managed lanes are intended to provide users a safer, less congested, more reliable alternative to move through the corridor. The vehicles that would use these facilities would include

automobiles with at least two occupants, van pools and buses. The primary purpose of this facility is to encourage the use of high occupancy vehicles.

The express bus system currently being implemented by GRTA and metro county local governments would be a prime user of these facilities. Park and ride lots along the corridor will be coordinated with to the extent possible to support this type of use.

Access points for the HOV system and/or bus park and ride facilities will be provided at strategic points to ensure the maximum usage of the system is encouraged.

Adding grade-separated interchanges at Collins Hill Road/SR 316 and SR 20/SR 316 will significantly reduce delay along SR 316 from SR 120 to east of the proposed interchange at SR 20/SR 316.

Reducing congestion in the vicinity of this intersection should significantly improve the safety in the vicinity and result in a substantial reduction of accidents.

#### **Description of the approved concept**

The proposed project would begin approximately 2,200 feet west of Breckinridge Boulevard where it would tie-in with the proposed concurrent High-Occupancy Vehicle (HOV) lanes entering SR 316 from the interchange reconstruction project at SR 316 and I-85 (Project Number HPP-IM-85-2(146), P.I. Number 110530). The proposed project would end approximately 1,500 feet east of Progress Center Avenue.

The proposed project, MSL-0003-00(168), would construct barrier separated HOV lanes and allow for HOV only access points throughout the project corridor. The HOV lanes would be constructed within the existing median along SR 316. No additional Single Occupant Vehicle (SOV) lanes would be added as a result of this project.

In order to accommodate the addition of the HOV lanes, other improvements throughout the corridor are necessary. These improvements include the reconstruction of SR 316 to accommodate the barrier separated HOV lanes within the median, and the addition of new bridges to accommodate the HOV lanes. New HOV interchanges/bridges include Herrington Road, Lawrenceville-Suwanee Road, Walther Boulevard, and Hi-Hope Road. Additionally, a new bridge is required at SR 120, and widening of the existing bridges at the Yellow River and the gas line easement west of Collins Hill Road. All new bridges would be designed in such a manner as to not preclude future identified improvements within the corridor.

Other improvements necessary to accommodate the HOV lanes include grade separation and interchange construction at the existing at-grade intersection of Collins Hill Road and SR 316. Connections between the Collins Hill Road and SR 20 interchanges would be created to facilitate operational efficiency. These connections are needed due to the proximity of these interchanges to one another.

HOV interchanges would be constructed at Herrington Road, Lawrenceville-Suwanee Road (west side ramps only), Walther Boulevard and Hi-Hope Road (west side ramps only). An additional access point will be provided in the vicinity of Sugarloaf Parkway as a direct merge from the HOV lane westbound to the SOV lanes westbound. This will provide an opportunity for HOV users to exit to Interstate 85 north

Revised Project Concept Report Page: 6  
Project Number: MSL-0003-00(168), MSL-0004-00(86)  
P. I. No. 0003168, P.I. No. 0004086  
County: Gwinnett

or to access the proposed Collector Distributor (C-D) Road between Old Peachtree Road and Pleasant Hill Road that is being constructed as part of the Interstate 85/SR 316 interchange construction project.

No direct access for businesses that currently have direct, at-grade access from SR 316 will be provided. All direct access to SR 316 for these businesses will be removed. A new access road will be constructed between Collins Hill Road and SR 20 to provide better access for the existing businesses adjacent to SR 316. A new connection will be provided to the Arrington-Blount Ford dealership on the southwest corner of Collins Hill Road and SR 316.

Existing connections of Hosea Road and Progress Center Drive to SR 316 will be closed. Existing surface street connections of these roadways provide access between SR 20, Hi-Hope Road, and Cedars Road.

The project will also include construction of grade separated interchanges at Collins Hill Road/SR 316 and SR 20/SR 316. These will improve the operational efficiency and capacity of the existing at-grade, signal-controlled intersections and promote a much better Level of Service for this portion of the corridor.

The Collins Hill Road bridge will span over SR 316. SR 316 mainline will remain approximately at its current grade and alignment. The SR 316 mainline profile will be modified in the vicinity of SR 20 so that SR 20 will be bridged over SR 316, elevating SR 20 slightly over its existing grade.

Because of the close proximity of Collins Hill Road to SR 20, it will be necessary to construct a Collector-Distributor (C-D) system between the two interchanges. This will improve the operational efficiency of these interchanges.

SOV Vehicles traveling eastbound on SR 316 will exit prior to Collins Hill Road to reach either Collins Hill Road or SR 20. A ramp has been provided underneath Collins Hill Road so that vehicles traveling to SR 20 will not have to pass through the signalized intersection at Collins Hill Road.

SOV traffic traveling westbound on SR 316, vehicles will exit prior to SR 20 to reach SR 20 or Collins Hill Road. The Collins Hill Road ramp is a loop ramp on the north side of SR 316.

Bridges and ramps will be designed to accommodate future improvements to the SR 316 corridor.

**PDP Classification:** Major ☒, Minor ☐

**Federal Oversight:** Full Oversight ☐, Exempt ☒, State Funded ☐, or Others ☐

**Functional Classification:** Principal Urban Arterial (non-Interstate)

**U. S. Route Number(s):** NA

**State Route Number(s):** SR 316

**Traffic (AADT):**

SR 316 General Purpose      **Base Year: (2009)**  
92,300

**Design Year: (2029)**  
135,400

Revised Project Concept Report Page: 7  
Project Number: MSL-0003-00(168), MSL-0004-00(86)  
P. I. No. 0003168, P.I. No. 0004086  
County: Gwinnett

SR 316 HOV	16,300	24,400
Herrington Road	11,800	32,800
Walther Boulevard	6,900	19,700
Collins Hill Road	20,000	30,100
SR 20 (Buford Road)	58,800	98,200
Hi-Hope Road	13,800	25,200

**Proposed features to be revised:**

Project Limits:

P.I. No. 0003168 includes SR 316 from I-85 to east of Progress Center Drive.

Revised alignment:

Loop ramps for Collins Hill Road interchange with SR 316 tie directly to Collins Hill Road at the intersection of Collins Industrial Way.

There is a proposed access road to serve businesses south of SR 316 between Collins Hill Road and SR 20. This access road connects Collins Hill Road to SR 20 on the south side of SR 316.

Access control:

Arrington-Blount Ford access from SR 316 will be closed. An access road in the southwest quadrant of the SR 316 and Collins Hill Road interchange is proposed to service the dealership and other parcels.

Gwinnett County Sheriffs Department driveway access to SR 316 is proposed to be closed. An access road is proposed that connects the Sheriffs Department parking lot to the intersection of Hi-Hope Road and Hurricane Shoals Road.

Hosea Road access to SR 316 is closed via proposed construction of a cul-de-sac.

**Revised features to be approved:**

Revised Project Limits:

P.I. No. 0003168 includes SR 316 from I-85 to west of Collins Hill Road and then from Hi-Hope Road to east of Progress Center Drive.

⇒ P.I. No. 004086 includes SR 316 from west of Collins Hill Road to Hi-Hope Road.

Revised alignment:

Loop ramps to exit Collector-Distributor and enter SR 316 westbound are revised to tie to a parallel roadway instead of Collins Hill Road. This proposed parallel roadway runs east-west between Collins Hill Road and SR 20, north of SR 316.

The Access Road for businesses east of Collins Hill Road and south of SR 316 is revised to tie to existing signalized intersection for Wal-Mart. Due to utility conflicts, this Access Road no longer connects to SR 20.

Access Control:



Access to Arrington-Blount Ford dealership and other parcels via proposed access road will be removed.

Reynolds Road will be re-aligned to tie to the access road for the Gwinnett County Sheriff's Department. This will add a connection for local traffic between SR 20 and Hurricane Shoals/Hope Road. The previous access road for the Gwinnett County Sheriff's Office will be re-aligned to no longer displace City of Lawrenceville natural gas tanks. Hurricane Shoals Road will be re-aligned to tie to the revised access road.

Hosea Road's direct access to SR 316 will be closed. Hosea Road will be open to traffic via a one way frontage road the will run between SR 20 and Hurricane Shoals Road.

A frontage road will be added between SR 20 and Hurricane Shoals Road to the south of SR 316. This frontage road will allow one way traffic between SR 20 and Hurricane Shoals Road along with access to Hosea Road and Gwinnett County Airport. The frontage road will parallel a tributary of Cedar Creek for 500 ft and will require a Stream Buffer Variance.

**Updated Traffic (AADT):** No change.

**Programmed/Schedule:**

**P.I. No. 0003168:**

P.E. 2003

R/W Authorized 2007

Construction: 2012

**P.I. No. 0004086:**

P.E. 2003

R/W Authorized 2007  
Proposed 2008

Construction: Proposed 2010

VE Study Required Yes (X) No ( ) **Completed April 21, 2005**

**Revised cost estimates:**

**P.I. No. 0003168:**

Construction: \$193,820,407.81

Right of Way: \$24,908,305.00 - Authorized

Utilities: \$600,000.00

**P.I. No. 0004086:**

Construction: \$49,375,922.35

Right of Way: \$5,000,000.00 - Authorized, \$50,000,000.00 - FY 2008

**Is the project located in a Non-attainment area?** ☒ Yes ☐ No

The proposed project concept matches the conforming plan's model description. The project limits are the interchange limits. The proposed changes are scheduled to be open to traffic for P.I. No. 0003168 in 2014 and for P.I. No. 0004086 in 2012.

Revised Project Concept Report Page: 2  
Project Number: MSL-0003-00(168), MSL-0004-00(86)  
P. I. No. 0003168, P.I. No. 0004086  
County: Gwinnett

**Recommendation:** Recommend that the proposed revision to the concept be approved for implementation.

**Attachments:**

1. Location Map
  - A. MSL-0003-00(168), P.I. No. 0003168
  - B. MSL-0004-00(86), P.I. No. 0004086
2. Cost Estimates:
  - A. MSL-0003-00(168), P.I. No. 0003168
    - a) Construction, including E&C
    - b) Right of Way
    - c) Utilities
  - B. MSL-0004-00(86), P.I. No. 0004086
    - a) Construction, including E&C
    - b) Right of Way
3. Benefit Cost Ratio Worksheet
  - A. MSL-0003-00(168), P.I. No. 0003168
  - B. MSL-0004-00(86), P.I. No. 0004086
4. 11"x 17" Original Approved Concept Drawings
5. 11"x 17" Revised Concept Drawings

Exempt projects

Concur: \_\_\_\_\_

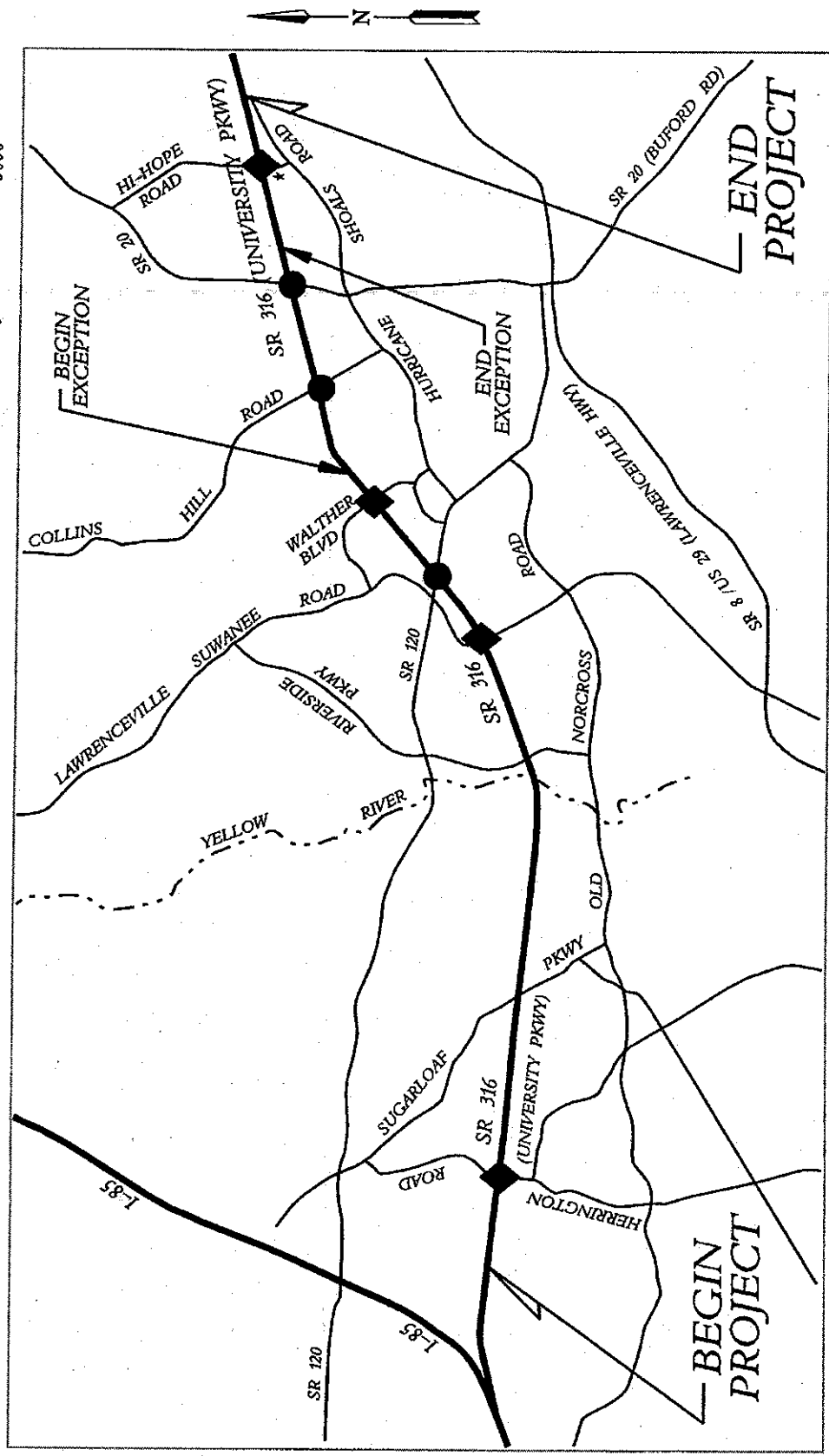
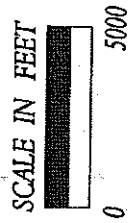
  
Director of Preconstruction

Approve: \_\_\_\_\_

  
Chief Engineer

**Revised Concept Report Attachments**  
**Attachment 1 – Location Map**


SR 316 FROM I-85 TO SR 20 - HOV LANES  
 MSL-0003-00(168) GWINNETT COUNTY  
 PI No. 0003168



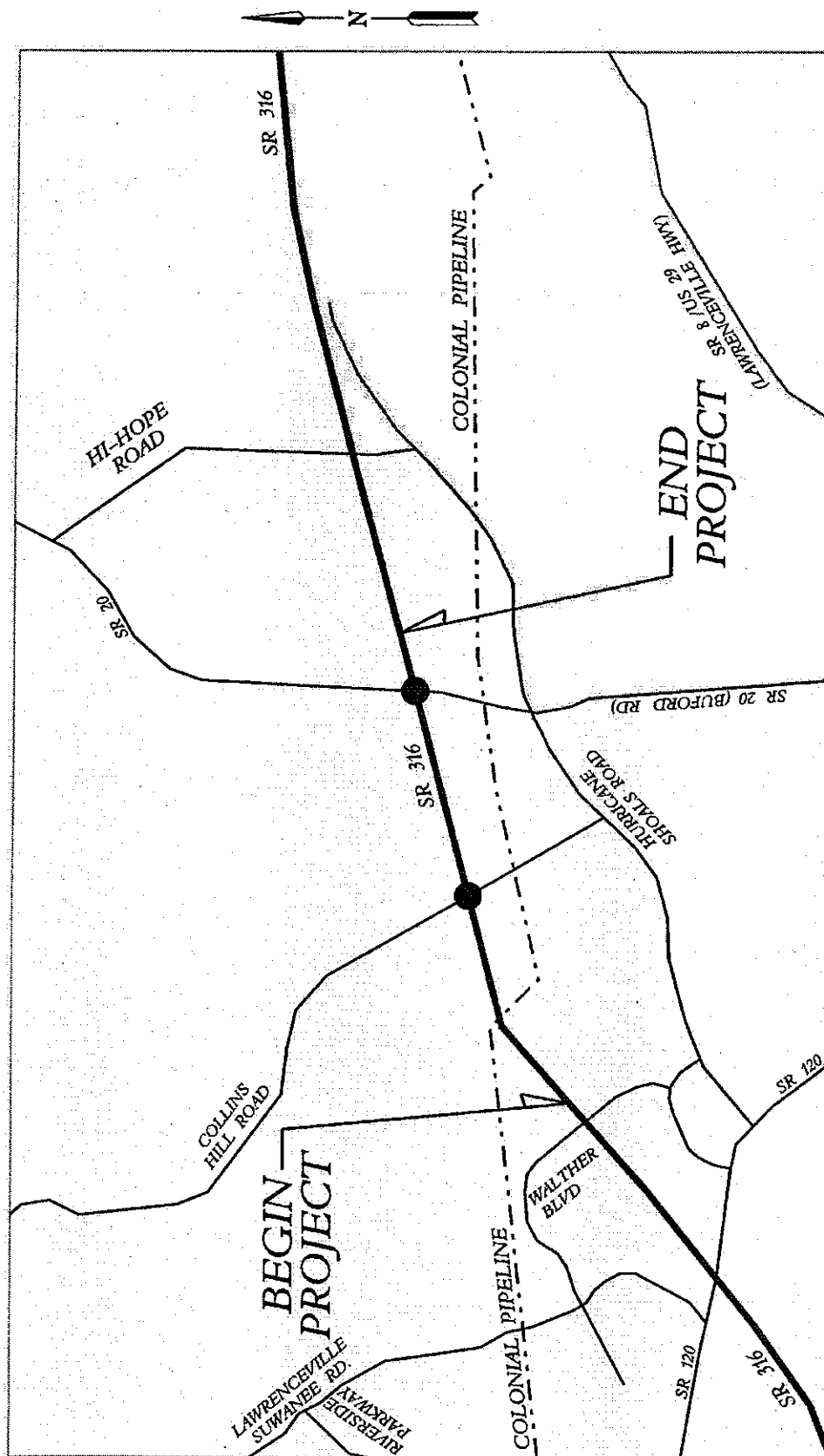
- ◆ - HOV INTERCHANGE
- - NEW BRIDGE OR INTERCHANGE

# LOCATION MAP

SCALE IN FEET



0 2500



● - NEW BRIDGE OR INTERCHANGE

# LOCATION MAP

**Revised Concept Report Attachments**  
**Attachment 2 – Cost Estimates**

## Estimate Report for file "0003168"

Section Roadway Items					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
150-1000	1	LS	6500000.00	TRAFFIC CONTROL -	6500000.00
153-1300	5	EA	76757.66	FIELD ENGINEERS OFFICE TP 3	383788.30
205-0001	906720	CY	4.67	UNCLASS EXCAV	4234382.40
206-0002	393140	CY	6.76	BORROW EXCAV, INCL MATL	2657626.40
207-0203	780	CY	56.37	FOUND BK FILL MATL, TP II	43968.60
310-5120	906230	SY	21.12	GR AGGR BASE CRS, 12 INCH, INCL MATL	19139577.60
402-3121	35100	TN	63.86	RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	2241486.00
402-3130	14480	TN	65.35	RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP 2 ONLY, INCL BITUM MATL & H LIME	946268.00
402-3192	151080	TN	86.59	RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL	13082017.20
413-1000	19360	GL	1.96	BITUM TACK COAT	37945.60
430-0820	799900	SY	67.71	CONT REINF CONC PVMT, CL 1 CONC, 12 INCH THK	54161229.00
433-1000	3880	SY	152.70	REINF CONC APPROACH SLAB	592476.00
441-0104	9680	SY	33.72	CONC SIDEWALK, 4 IN	326409.60
441-0740	3880	SY	31.66	CONCRETE MEDIAN, 4 IN	122840.80
441-6022	22530	LF	20.68	CONC CURB & GUTTER, 6 IN X 30 IN, TP 2	465920.40
441-6720	10120	LF	15.91	CONC CURB & GUTTER, 6 IN X 30 IN, TP 7	161009.20
500-3101	1750	CY	581.59	CLASS A CONCRETE	1017782.50
500-3107	120	CY	759.76	CLASS A CONCRETE, RETAINING WALL	91171.20
500-3201	29	CY	527.10	CLASS B CONCRETE, RETAINING WALL	15285.90
500-3800	55	CY	765.72	CLASS A CONCRETE, INCL REINF STEEL	42114.60
500-9999	240	CY	173.86	CLASS B CONC, BASE OR PVMT WIDENING	41726.40
511-1000	166300	LB	0.92	BAR REINF STEEL	152996.00
550-1180	1130	LF	46.84	STORM DRAIN PIPE, 18 IN, H 1-10	52929.20
550-1181	38900	LF	57.09	STORM DRAIN PIPE, 18 IN, H 10-15	2220801.00
550-1240	4250	LF	53.16	STORM DRAIN PIPE, 24 IN, H 1-10	225930.00
550-1300	2210	LF	71.61	STORM DRAIN PIPE, 30 IN, H 1-10	158258.10
550-1360	30	LF	87.01	STORM DRAIN PIPE, 36 IN, H 1-10	2610.30
550-1361	110	LF	97.64	STORM DRAIN PIPE, 36 IN, H 10-15	10740.40
550-1421	250	LF	96.76	STORM DRAIN PIPE, 42 IN, H 10-15	24190.00
550-1481	690	LF	142.87	STORM DRAIN PIPE, 48 IN, H 10-15	98580.30
550-1542	250	LF	229.00	STORM DRAIN PIPE, 54 IN, H 15-20	57250.00
550-1601	130	LF	222.00	STORM DRAIN PIPE, 60 IN, H 10-15	28860.00
550-4142	5	EA	1551.30	FLARED END SECTION 42 IN, SIDE DRAIN	7756.50
550-4218	50	EA	666.57	FLARED END SECTION 18 IN, STORM DRAIN	33328.50
550-4224	10	EA	776.50	FLARED END SECTION 24 IN, STORM DRAIN	7765.00
550-4230	10	EA	951.37	FLARED END SECTION 30 IN, STORM DRAIN	9513.70
550-4236	2	EA	1251.52	FLARED END SECTION 36 IN, STORM DRAIN	2503.04
603-2018	1000	SY	58.84	STN DUMPED RIP RAP, TP 1, 18 IN	58840.00
611-8000	0	EA	1876.39	ADJUST CATCH BASIN TO GRADE	0.00
611-8040	2	EA	2214.68	ADJUST DROP INLET TO GRADE	4429.36
611-8050	0	EA	1251.58	ADJUST MANHOLE TO GRADE	0.00
621-4020	170	LF	313.84	CONCRETE SIDE BARRIER, TYPE 2	53352.80
621-4021	250	LF	419.39	CONCRETE SIDE BARRIER, TYPE 2A	104847.50
621-4022	400	LF	562.96	CONCRETE SIDE BARRIER, TYPE 2B	225184.00
621-4062	220	LF	550.00	CONCRETE SIDE BARRIER, TYPE 6B	121000.00
621-4070	0	LF	69.94	CONCRETE SIDE BARRIER, TYPE 7C	0.00
621-4080	91	LF	154.33	CONCRETE SIDE BARRIER, TYPE 7R	14044.03
621-4085	8500	LF	40.47	CONCRETE SIDE BARRIER, TYPE 7W	343995.00
621-6002	35450	LF	79.47	CONCRETE BARRIER, TP S-2	2817211.50
621-6004	72900	LF	300.00	CONCRETE BARRIER, TP S-3A	21870000.00
624-0201	10700	SF	20.68	SOUND BARRIER, TYPE B, 10-20 FT HT	221276.00
627-1010	159090	SF	55.04	MSE WALL FACE, 10 - 20 FT HT, WALL NO -	8756313.60
627-1100	1200	LF	67.25	COPING A, WALL NO -	80700.00
627-1120	3850	LF	250.00	COPING B, WALL NO -	962500.00
627-1140	7750	LF	250.00	TRAFFIC BARRIER V, WALL NO -	1937500.00
628-0100	1	Lump Sum	484636.18	PERMANENT SOIL-NAILED WALL,	484636.18
634-1200	346	EA	101.14	RIGHT OF WAY MARKERS	34994.44
641-1100	2000	LF	48.31	GUARDRAIL, TP T	96620.00
641-1200	38020	LF	16.01	GUARDRAIL, TP W	608700.20
641-5001	33	EA	635.33	GUARDRAIL ANCHORAGE, TP 1	20965.89

641-5012	35	EA	1778.08	GUARDRAIL ANCHORAGE, TP 12	62232.80
643-1152	1820	LF	16.46	CH LK FENCE, ZC COAT, 6 FT, 9 GA	29957.20
668-1100	96	EA	2745.73	CATCH BASIN, GP 1	263590.08
668-2100	193	EA	3010.82	DROP INLET, GP 1	581088.26
668-2233	211	EA	5276.00	DROP INLET, GP 1, MODIFIED TP M-3	1113236.00
668-4300	5	EA	2545.56	STORM SEWER MANHOLE, TP 1	12727.80
668-5000	4	EA	2272.59	JUNCTION BOX	9090.36
<b>Section Sub Total:</b>					<b>\$150,288,070.74</b>

**Section Erosion Control**

Item Number	Quantity	Units	Unit Price	Item Description	Cost
716-XXXX	1	Lump Sum	2050000.00	EROSION CONTROL	2050000.00
<b>Section Sub Total:</b>					<b>\$2,050,000.00</b>

**Section Signing & Marking**

Item Number	Quantity	Units	Unit Price	Item Description	Cost
653-XXXX	1	Lump Sum	1700000.00	SIGNING & MARKING	1700000.00
<b>Section Sub Total:</b>					<b>\$1,700,000.00</b>

**Section Bridge**

Item Number	Quantity	Units	Unit Price	Item Description	Cost
540-1102	5	LS	100000.00	REMOVAL OF EXISTING BR, BR NO -	500000.00
543-1100	196930	SF	110.00	CONSTR OF BRIDGE - COMPLETE	21662300.00
<b>Section Sub Total:</b>					<b>\$22,162,300.00</b>

**Total Estimated Cost: \$176,200,370.74****Subtotal Construction Cost \$176,200,370.74**

E&amp;C Rate 10.0 % \$17,620,037.07

Inflation Rate 0.0 % @ 0.0 Years \$0.00

**Total Construction Cost \$193,820,407.81**

Right Of Way \$0.00

ReImb. Utilities ~~\$0.00~~  
600,000**Grand Total Project Cost \$193,820,407.81**

\$194,420,407.81

1000  
11/7/08  
=



# **DETAIL COST ESTIMATE SUMMARY SHEET**

DATE: February 20, 2008 P.I. #: 0003168  
 PROJECT: MSL-0003-00(168) COUNTY: Gwinnett PARCELS: 80  
 PROJECT DESCRIPTION: SR 316 FM E of I-85 to CR 183 – HOV Lanes, including 2 Interchanges

**1. LAND: (Total area and cost by category)**

Right of Way:	\$	
Permanent and Temporary Easement:	\$	
<b>Total</b>		<b>\$ SEE TOTAL</b>

**2. IMPROVEMENTS:**

Main Structures	\$	
Site Improvements	\$	
<b>Total</b>		<b>\$ SEE TOTAL</b>

**3. Damages:**

Damages to Land and Structures	\$	
Specialty Costs (Cost to Cures, Trade Fixtures, etc.)	\$	
<b>Total</b>		<b>\$ SEE TOTAL</b>

**Total of Land, Improvements & Damages**

**\$ 12,531,389.00**

**4. RELOCATION: (Including Consequential Displacements)**

Businesses (4 Displaced x \$15,000):	\$	60,000.00
Residential Tenant: (1 Displaced x \$20,000):	\$	20,000.00
Residential Owner (1 Displaced x \$40,000):	\$	40,000.00
<b>Total</b>		<b>\$12,651,389.00</b>

**5. Property Management (Asbestos Removal and Demolition)**

Number of Structures <u>4</u> x \$25,000/structure	\$	100,000.00
Number of sites with UST's <u>      </u> x \$50,000	\$	
Number of signs (not billboards) <u>      </u> x \$1,500	\$	
<b>Total</b>		<b>\$ 100,000.00</b>

**Estimated Cost of Right of Way**

**\$12,751,389.00**

C/O, Condemnation Increase & Legal Cost (50% of R/W)	\$	6,375,695.00
Service Fees and Appraisal Cost(80 Par x \$7,500)	\$	600,000.00
Condemnation Cost (80 Par x 15% x \$7,500)	\$	90,000.00
Incidentals (80 Par x \$2,000)	\$	160,000.00

**Net Cost**

**\$19,977,084.00**

Market Appreciation (5% rural, 10% urban)

**\$ 1,997,708.00**

**TOTAL COST**

**\$ 21,974,792.00**

**TOTAL COST (ROUNDED)**

**\$ 21,980,000.00**

Credits: # Hours

Cc:

Attachment(s): Project Location Map; Comparable Sales Data

**REVISED: 12-8-06**

**Franks, Jill L.**

---

**From:** Oliver, Robby  
**Sent:** Wednesday, January 18, 2006 4:19 PM  
**To:** Franks, Jill L.  
**Cc:** O'Brien, Neal; Jacques, Jeffrey  
**Subject:** MSL-0003-00(186), PI# 0003168 & MSL-0004-00(86), PI# 0004086 SR 316

As requested, we are providing a **preliminary** reimbursable utility cost estimate for the subject projects. The initial cost assessment is as follows:

Colonial Pipeline	\$500,000.00
Electrical Transmission	\$50,000.00
Electrical Distribution	\$30,000.00
Water and Sewer	\$20,000.00
<b>TOTAL</b>	<b>\$600,000.00</b>

Of course, this is a very rough preliminary estimate. More accurate cost will be gathered at the second submission utility stage. Thanks,

*Robby B. Oliver*  
*Assistant District Utilities Engineer*  
*District One Utilities*  
*(770) 532-5510*  
*Mail to: [robby.oliver@dot.state.ga.us](mailto:robby.oliver@dot.state.ga.us)*  
*Department of Transportation*  
*2505 Athens Highway, S.E.*  
*Gainesville, GA 30507*

## Estimate Report for file "0004086"

Section Roadway Items					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
150-1000	1	LS	2000000.00	TRAFFIC CONTROL -	2000000.00
153-1300	2	EA	76757.66	FIELD ENGINEERS OFFICE TP 3	153515.32
205-0001	483260	CY	4.67	UNCLASS EXCAV	2256824.20
206-0002	43450	CY	6.76	BORROW EXCAV, INCL MATL	293722.00
207-0203	0	CY	56.37	FOUND BK FILL MATL, TP II	0.00
310-5120	238030	SY	21.12	GR AGGR BASE CRS, 12 INCH, INCL MATL	5027193.60
402-3121	31900	TN	63.86	RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	2037134.00
402-3130	11000	TN	65.35	RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP 2 ONLY, INCL BITUM MATL & H LIME	718850.00
402-3192	42200	TN	86.59	RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL	3654098.00
413-1000	12400	GL	1.96	BITUM TACK COAT	24304.00
430-0820	144000	SY	67.71	CONT REINF CONC PVMT, CL 1 CONC, 12 INCH THK	9750240.00
433-1000	2500	SY	152.70	REINF CONC APPROACH SLAB	381750.00
441-0104	6020	SY	33.72	CONC SIDEWALK, 4 IN	202994.40
441-0740	9800	SY	31.66	CONCRETE MEDIAN, 4 IN	310268.00
441-6022	15270	LF	20.68	CONC CURB & GUTTER, 6 IN X 30 IN, TP 2	315783.60
441-6720	5380	LF	15.91	CONC CURB & GUTTER, 6 IN X 30 IN, TP 7	85595.80
500-3101	0	CY	581.59	CLASS A CONCRETE	0.00
500-3107	120	CY	759.76	CLASS A CONCRETE, RETAINING WALL	91171.20
500-3201	0	CY	527.10	CLASS B CONCRETE, RETAINING WALL	0.00
500-3800	15	CY	765.72	CLASS A CONCRETE, INCL REINF STEEL	11485.80
500-9999	320	CY	173.86	CLASS B CONC, BASE OR PVMT WIDENING	55635.20
511-1000	0	LB	0.92	BAR REINF STEEL	0.00
550-1180	0	LF	46.84	STORM DRAIN PIPE, 18 IN, H 1-10	0.00
550-1181	14000	LF	57.09	STORM DRAIN PIPE, 18 IN, H 10-15	799260.00
550-1240	240	LF	53.16	STORM DRAIN PIPE, 24 IN, H 1-10	12758.40
550-1300	2200	LF	71.61	STORM DRAIN PIPE, 30 IN, H 1-10	157542.00
550-1360	1800	LF	87.01	STORM DRAIN PIPE, 36 IN, H 1-10	156618.00
550-1361	0	LF	97.64	STORM DRAIN PIPE, 36 IN, H 10-15	0.00
550-1421	160	LF	96.76	STORM DRAIN PIPE, 42 IN, H 10-15	15481.60
550-1481	920	LF	142.87	STORM DRAIN PIPE, 48 IN, H 10-15	131440.40
550-1542	0	LF	229.00	STORM DRAIN PIPE, 54 IN, H 15-20	0.00
550-1601	0	LF	222.00	STORM DRAIN PIPE, 60 IN, H 10-15	0.00
550-4142	4	EA	1551.30	FLARED END SECTION 42 IN, SIDE DRAIN	6205.20
550-4218	10	EA	666.57	FLARED END SECTION 18 IN, STORM DRAIN	6665.70
550-4224	2	EA	776.50	FLARED END SECTION 24 IN, STORM DRAIN	1553.00
550-4230	3	EA	951.37	FLARED END SECTION 30 IN, STORM DRAIN	2854.11
550-4236	4	EA	1251.52	FLARED END SECTION 36 IN, STORM DRAIN	5006.08
603-2018	0	SY	58.84	STN DUMPED RIP RAP, TP 1, 18 IN	0.00
611-8000	3	EA	1876.39	ADJUST CATCH BASIN TO GRADE	5629.17
611-8040	0	EA	2214.68	ADJUST DROP INLET TO GRADE	0.00
611-8050	1	EA	1251.58	ADJUST MANHOLE TO GRADE	1251.58
621-4020	170	LF	313.84	CONCRETE SIDE BARRIER, TYPE 2	53352.80
621-4021	610	LF	419.39	CONCRETE SIDE BARRIER, TYPE 2A	255827.90
621-4022	340	LF	562.96	CONCRETE SIDE BARRIER, TYPE 2B	191406.40
621-4062	0	LF	550.00	CONCRETE SIDE BARRIER, TYPE 6B	0.00
621-4070	270	LF	69.94	CONCRETE SIDE BARRIER, TYPE 7C	18883.80
621-4080	0	LF	154.33	CONCRETE SIDE BARRIER, TYPE 7R	0.00
621-4085	5200	LF	40.47	CONCRETE SIDE BARRIER, TYPE 7W	210444.00
621-6002	0	LF	79.47	CONCRETE BARRIER, TP S-2	0.00
621-6004	0	LF	300.00	CONCRETE BARRIER, TP S-3A	0.00
624-0201	0	SF	20.68	SOUND BARRIER, TYPE B, 10-20 FT HT	0.00
627-1010	34680	SF	55.04	MSE WALL FACE, 10 - 20 FT HT, WALL NO -	1908787.20
627-1100	310	LF	67.25	COPING A, WALL NO -	20847.50
627-1120	1000	LF	250.00	COPING B, WALL NO -	250000.00
627-1140	1160	LF	250.00	TRAFFIC BARRIER V, WALL NO -	290000.00
634-1200	184	EA	101.14	RIGHT OF WAY MARKERS	18609.76
641-1100	820	LF	48.31	GUARDRAIL, TP T	39614.20
641-1200	10110	LF	16.01	GUARDRAIL, TP W	161861.10
641-5001	11	EA	635.33	GUARDRAIL ANCHORAGE, TP 1	6988.63
641-5012	10	EA	1778.08	GUARDRAIL ANCHORAGE, TP 12	17780.80
643-1152	400	LF	16.46	CH LK FENCE, ZC COAT, 6 FT, 9 GA	6584.00

668-1100	61	EA	2745.73	CATCH BASIN, GP 1	167489.53
668-2100	50	EA	3010.82	DROP INLET, GP 1	150541.00
668-2233	52	EA	5276.00	DROP INLET, GP 1, MODIFIED TP M-3	274352.00
668-4300	11	EA	2545.56	STORM SEWER MANHOLE, TP 1	28001.16
668-5000	0	EA	2272.59	JUNCTION BOX	0.00
<b>Section Sub Total:</b>					<b>\$32,744,202.14</b>

**Section Bridge**

Item Number	Quantity	Units	Unit Price	Item Description	Cost
540-1102	0	LS	100000.00	REMOVAL OF EXISTING BR, BR NO -	0.00
543-1100	96300	SF	110.00	CONSTR OF BRIDGE - COMPLETE	10593000.00
<b>Section Sub Total:</b>					<b>\$10,593,000.00</b>

**Section Erosion Control**

Item Number	Quantity	Units	Unit Price	Item Description	Cost
716-XXXX	1	Lump Sum	750000.00	EROSION CONTROL	750000.00
<b>Section Sub Total:</b>					<b>\$750,000.00</b>

**Section Signing & Marking**

Item Number	Quantity	Units	Unit Price	Item Description	Cost
653-XXXX	1	Lump Sum	800000.00	SIGNING & MARKING	800000.00
<b>Section Sub Total:</b>					<b>\$800,000.00</b>

**Total Estimated Cost: \$44,887,202.14****Subtotal Construction Cost \$44,887,202.14**

E&amp;C Rate 10.0 % \$4,488,720.21

Inflation Rate 0.0 % @ 0.0 Years \$0.00

**Total Construction Cost \$49,375,922.35**

Right Of Way \$0.00

ReImb. Utilities \$0.00

**Grand Total Project Cost \$49,375,922.35**

# DETAIL COST ESTIMATE SUMMARY SHEET

DATE: February 20, 2008 P.I. #: 0004086  
PROJECT: MSL-0004-00(086) COUNTY: Gwinnett PARCELS: 70  
PROJECT DESCRIPTION: SR 316 @ SR 20 Construction Interchange

1. LAND: (Total area and cost by category)

Right of Way:

Permanent and Temporary Easement:

**Total**

\$

\$

\$ SEE TOTAL

2. IMPROVEMENTS:

Main Structures

Site Improvements

**Total**

\$

\$

\$ SEE TOTAL

3. Damages:

Damages to Land and Structures

Specialty Costs (Cost to Cures, Trade Fixtures, etc.)

**Total**

\$

\$

\$ SEE TOTAL

**Total of Land, Improvements & Damages**

**\$ 32,549,218.00**

4. RELOCATION: (Including Consequential Displacements)

Businesses (9 Displaced x \$15,000):

Residential Tenant: (1 Displaced x \$20,000):

Residential Owner (1 Displaced x \$40,000):

**Total**

\$ 135,000.00

\$ 20,000.00

\$ 40,000.00

\$ 195,000.00

5. Property Management (Asbestos Removal and Demolition)

Number of Structures 9 x \$25,000/structure

Number of sites with UST's        x \$50,000

Number of signs (not billboards)        x \$1,500

**Total**

\$ 200,000.00

\$

\$

\$ 200,000.00

**Estimated Cost of Right of Way**

**\$ 32,944,218.00**

C/O, Condemnation Increase & Legal Cost (50% of R/W)

Service Fees and Appraisal Cost (70 Par x \$7,500)

Condemnation Cost (70 Par x 15% x \$7,500)

Incidentals (70 Par x \$2,000)

\$16,472,109.00

\$ 525,000.00

\$ 78,750.00

\$ 140,000.00

**Net Cost**

**\$ 50,160,077.00**

Market Appreciation (5% rural, 10% urban)

\$ 5,016,007.00

**TOTAL COST**

**\$ 55,176,084.00**

**TOTAL COST (ROUNDED)**

**\$ 55,200,000.00**

Credits:

# Hours

Cc:

Attachment(s): **Project Location Map; Comparable Sales Data**

**REVISED: 12-8-06**

**Revised Concept Report Attachments**  
**Attachment 3 – Benefit Cost**  
**Ratio Worksheet**

# **Benefit Cost Analysis Work Sheet** **CONGESTION Projects**

MSL-0003-00(168)  
 PI NUMBER 0003168  
 GWINNETT COUNTY

SR 316 from I-85 to SR 20 for HOV Lanes

$$\text{Congestion Benefit} = \text{Tb} + \text{CMb} + \text{Fb}$$

## **Person Time Savings Benefit (Tb)**

*Db (hrs)	0.0515
ADT	160,000.00
Tb (\$s)	\$283,250,000.00

## **Commercial or Truck Time Savings Benefit (CMb)**

Db (hrs)	0.0515
% Truck Traffic	0.07
ADT	160,000.00
CMb	\$104,761,300.00

## **Fuel Savings Benefit (Fb)**

ADT	160,000.00
Fb (\$s)	\$98,708,333.33

<b>Total Congestion Benefit</b>	<b>\$486,719,633.33</b>
<b>Total Project Cost</b>	<b>\$247,185,407.81</b>
<b>B/C Ratio</b>	<b>1.97</b>

# **Benefit Cost Analysis Work Sheet** **CONGESTION Projects**

MSL-0004-00(86)  
 PI NUMBER 0004086  
 GWINNETT COUNTY

*SR 316 at Collins Hill Road and SR 20*

**Congestion Benefit = Tb + CMb + Ab**

## **Time Benefit (Tb)**

Db (hrs)	0.0493
ADT	97,900
Tb (\$s)	\$149,418,692.93

## **Commercial Benefit (CMb)**

Db (hrs)	0.0493
% Truck Traffic	0.08
ADT	97,900
CMb	\$68,635,514.03

<b>Total Congestion Benefit</b>	<b>\$218,054,206.97</b>
<b>Construction Cost</b>	<b>\$126,240,922.35</b>

<b>B/C Ratio</b>	<b>1.73</b>
------------------	-------------



# DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

## INTERDEPARTMENT CORRESPONDENCE

**FILE** PI 0004086; PI 0003168

**DATE** March 3, 2008

**SUBJECT:** Funding Shifts for PI 0004086 and PI 0003168 - February 27, 2008

Attendees:

Todd long, GDOT  
Phil Copeland, GDOT  
Ben Buchan, GDOT  
Neal O'Brien, GDOT  
Cindy VanDyke, GDOT  
Ulysses Mitchell, GDOT  
Jason Crane, GDOT  
Henry Green, GDOT  
Jill Franks, GDOT  
Genetha Rice-Singleton, GDOT

Meeting Minutes:

At this meeting, the addition of ROW and CST phases to PI 0004086 (SR 316 @ Collins Hill and SR 20) and the appropriate funding shifts were discussed:

Regarding PI 0003168 (SR 316 HOV project), approximately \$30 million has been authorized of which only \$21,980,000 is needed. Approximately \$5 million of the authorized amount is within the length of PI 0004086 (SR 316 @ Collins Hill and SR 20 interchange project) and should therefore be appropriated to the project so that ROW can be certified, as it is anticipated that the interchange project will be completed prior to the HOV project. The next modification needed involves \$99,766,000, which has been programmed for ROW in FY 2008 that will not be needed. It is proposed that these funds be removed and shifted to PI 0004086 to fund ROW (\$50 million) in 2008 and CST (\$49,375,922) in 2010.

Next Steps:

**Planning** will document the changes discussed and proceed with programming based on the following charts:

**PI 0003168**

New description: SR 316 from E of I-85 to Progress Center/CR 183 - HOV Lanes (HOV Lanes Project)

Phase	fund code	Proposed Year	Previous Amount	Proposed Amount	Notes
ROW	L010	AUTH	\$29,908,305	\$24,908,305	Revised cost
ROW	L010	DEL	\$99,766,000	\$0	DELETE
CST	GRVA	2012	\$304,799,000	193,820,407	Revised cost